

### ABSTRACT

A soft magnetic thin film of CoFe alloy having a high  
5 Br and low H<sub>c</sub> is prepared by furnishing a plating tank  
including cathode and anode compartments which are separated  
by a diaphragm or salt bridge so as to permit charge transfer,  
but inhibit penetration of Fe ions, feeding a plating  
solution containing Co ions and divalent Fe ions to the  
10 cathode compartment, feeding an electrolyte solution to the  
anode compartment, immersing a substrate in the plating  
solution, immersing an anode in the electrolyte solution,  
electroplating, and heat treating the plated film at  
100-550°C; or by immersing a substrate and a soluble anode in  
15 a plating solution containing Co ions and divalent Fe ions,  
electroplating, and heat treating the plated film at  
100-550°C.